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**Sent:** Wednesday, April 05, 2006 2:39 PM

**To:** Benham, Katherine; zea@ccof.org%inter2; milla@handleycellars.com%inter2

**Subject:** Comments on hydrated lime

**Attachments:** ATTACHMENT.TXT

I have the following comments on hydrated lime:

First, it is not produced by the "burning of various forms of limestone". Limestone does not "burn" (Combustion is an oxidation process in which carbon or other materials are oxidized). Limestone  $\text{CaCO}_3$  is heated, which drives off the  $\text{CO}_2$ , leaving  $\text{CaO}$ . Water is then added to hydrate the lime. This could be considered a chemical change, but then anything that ionizes in water could also be considered as such.

I have recommended the use of  $\text{CaOH}$  for 25 years with Bordeaux/copper sprays, as a calcium foliar nutrient, and as a stand-alone miticide/fungicide. Although it is high pH and caustic to skin and eyes, it is a relatively safe material to work with.

When  $\text{CaOH}$  is mixed with water, soil, or air, a certain percentage, and eventually all, would revert to  $\text{CaCO}_3$  by absorbing  $\text{CO}_2$  (or its dissolved form,  $\text{HCO}_3^-$ ).

There are finely ground limestones available that might work as substitutes; however these are not registered as pesticide adjuvants at this time.

Hydrated lime could be considered a processed rock powder or a chemically modified mineral and either would be accurate.

I recommend keeping hydrated lime as a tool in organic production.

**\*\*** For aquatic plant products, there need to be more alternatives allowed for stabilization of kelp. This is a valuable product with many uses in agriculture: root dip, foliar spray, adjuvant for nutrient uptake.

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